

Serial No. 10/523,512
Atty. Doc. No. 2002P13083WOUS

Amendments to the Claims:

Please amend the claims as shown. Applicants reserve the right to pursue any cancelled claims at a later date.

1 – 22 (canceled)

23. (currently amended) A device for the generation or destruction of eddies in a flow medium, comprising:

a profile having a leading and a trailing edge and arranged in a flow duct having an axis of flow direction such that the flow medium flows around the profile, and

an external drive in mechanical communication with the profile and adapted to provide the profile with periodic translational movement back and forth along an axis perpendicular to the flow direction axis,

wherein the movement by the external drive upon the profile is effective to form finite edge vortices along the trailing edge during passage of flow medium in the flow duct,

~~wherein the profile is assigned an external drive designed for the generation of a periodic oscillating movement of the respective profile in relation to the flow medium with an angular frequency ω .~~

24. (currently amended) The device as claimed in claim 23, wherein the external drive is adapted to communicate a rotational movement to the profile that additionally comprises a periodic movement to the profile parallel to flow direction axis~~a shape and a size of the profile are selected such that during operation a quotient of the flow velocity averaged over a movement period of the profile and a maximum flow velocity at a profile trailing edge has a predetermined value.~~

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25. (currently amended) The device as claimed in claim 23, wherein the external drive is adapted to additionally communicate periodic oscillating movement provided is a pivoting movement of the profile that results from a rotation of the profile about an axis of rotation that is perpendicular to [[a]]the flow direction of the flow medium through an angle ϕ .

26. (currently amended) The device as claimed in claim 25, wherein the flow duct has two profiles arranged within that oscillate with the same angular frequency ω and in countersynchronism an opposite phase about their respective axes [[axis]] of rotation and the axes of rotation are oriented parallel to each other.

27. (currently amended) The device as claimed in claim [[23]]25, wherein the external drive comprises a first drive to effectuate the periodic translational movement back and forth along an axis perpendicular to the flow direction axis and a second drive to effectuate rotation of the profile about an axis of rotation that is perpendicular to the flow direction periodic oscillating movement is comprised of a periodic displacement of the profile perpendicular to the flow direction of the flow medium.

28. (canceled).

29. (canceled).

30. (currently amended) The device as claimed in claim 23, wherein the device is followed by a second profile device arranged on a flow medium side, for the destruction of vortices.

31. (currently amended) The device as claimed in claim [[23]]25, wherein the device comprises a plurality of profiles that execute the periodic oscillating-pivoting movement with the same angular frequency ω and the same phase and is arranged in a flow duct of a conveying zone for the transport of the flow medium.

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32. (canceled)

33. (previously presented) The device as claimed in claim 23, wherein the device is located within a gas turbine.

34 - 42. (canceled)

43. (new) An axial cascade device comprising in axial flow series:

a vortex generating row comprising a plurality of vane members each comprising a rotatable profile arranged in a flow duct such that a flow medium flows around the profile, each profile adapted to rotate about a respective axis of rotation by an external drive,

a row of stationary vanes arranged offset from a projected path of vortices generated by the respective rotatable profiles, and

a row of moving blades,

wherein the external drive rotates the respective profiles for displacement of the vortices responsive to movement of the moving blades.

44. (new) The axial cascade device of claim 43, wherein the profiles are mounted on a first common connecting rod in the region of their respective trailing edges, and the first common connecting rod is in driven relationship to a second connecting rod driven in a back and forth movement by the external drive.

45. (new) The axial cascade device of claim 43, wherein the vane members additionally comprise a respective stationary member disposed upstream and adjacent an upstream end of each profile.